

Amendments to the Claims

Claim 1 (**Currently Amended**) A permanent magnet field small DC motor comprising:
a soft-magnetic frame; and
an arc-shaped permanent magnet fixed in said soft-magnetic frame,
wherein an outer surface of said arc-shaped permanent magnet has a pair of end portions
and a middle portion therebetween at ends of said arc-shaped permanent magnet in a thrust
direction, said end portions fit along an inner surface of said soft-magnetic frame, and said
middle portion has a pair of recessed sections that regions of said outer surface of said arc-
shaped permanent magnet at ends of said arc-shaped permanent magnet in a circumferential
direction and between said outer surface at said ends in the thrust direction are recessed on outer
middle portion regions of said middle portion with respect to said outer surface at said ends in
the thrust direction end portions.

Claim 2 (**Currently Amended**) The permanent magnet field small DC motor of claim 1, further comprising:

~~another arc-shaped permanent magnet, said arc-shaped permanent magnet and said~~
~~another arc-shaped permanent magnet being a pair of~~ said arc-shaped permanent magnets; and
a pair of springs,

wherein said pair of arc-shaped permanent magnets are disposed opposing each other in
said soft-magnetic frame with said end portions outer surface at said ends in the thrust direction
fitting along said inner surface of said soft-magnetic frame, and said arc-shaped permanent
magnets are fixed at said ends in a direction of curvature in the circumferential direction using
said springs, respectively.

Claim 3 (**Previously Presented**) The permanent magnet field small DC motor of claim 2,
wherein said arc-shaped permanent magnets comprise a compression molded material of rare
earth iron based melt-spun flakes and a binder.

Claim 4 (**Previously Presented**) The permanent magnet field small DC motor of claim 2,
wherein said arc-shaped magnets have a maximum thickness of 1 mm.

Claim 5 (Currently Amended) The permanent magnet field small DC motor of claim 1, wherein clearances are formed between said recessed sections-middle regions of said arc-shaped permanent magnet and said soft-magnetic frame.

Claim 6 (Currently Amended) The permanent magnet field small DC motor of claim 3, wherein a curvature of said recessed sections-middle regions of said arc-shaped permanent magnets is different from that of said outer surface at said end portions-ends of the arc-shaped permanent magnets in the thrust direction so that said soft-magnetic frame does not function as a back yoke at said recessed sections-middle regions.

Claim 7 (Currently Amended) The permanent magnet field small DC motor of claim 1, further comprising another arc-shaped permanent magnet, said arc-shaped permanent magnet and said another arc-shaped permanent magnet being a pair of said arc-shaped permanent magnets fixed along said inner surface of said soft-magnetic frame opposing each other, wherein said arc-shaped permanent magnets exhibit different demagnetization curves at least by unsaturated magnetization.

Claim 8 (Currently Amended) The permanent magnet field small DC motor of claim 5, further comprising another arc-shaped permanent magnet, said arc-shaped permanent magnet and said another arc-shaped permanent magnet being a pair of said arc-shaped permanent magnets, wherein said arc-shaped permanent magnets oppose each other and are fixed along said inner surface of said soft-magnetic frame, and each of said arc-shaped permanent magnets has a-a rate of demagnetization that increases along with a distance from a center of a magnetic pole towards said ends in a direction of curvature-the circumferential direction, whereby the rate of demagnetization is greatest between said recessed sections-middle regions and said soft-magnetic frame.

Claim 9 (Currently Amended) An optical pickup device comprising:

a permanent magnet field small DC motor comprising a soft-magnetic frame; and

an arc-shaped permanent magnet fixed in said soft-magnetic frame,

wherein an outer surface of said arc-shaped permanent magnet has a pair of end portions and a middle portion therebetween at ends of said arc-shaped permanent magnet in a thrust direction, said end portions fit along an inner surface of said soft-magnetic frame, and said middle portion has a pair of recessed sections that regions of said outer surface of said arc-

~~shaped permanent magnet at ends of said are shaped permanent magnet in a circumferential direction and between said outer surface at said ends in the thrust direction are recessed on outer middle portion regions of said middle portion with respect to said outer surface at said ends in the thrust direction end portions.~~

Claim 10 (**Currently Amended**) The permanent magnet field small DC motor of claim 1, wherein said recessed sections-middle regions are planar.

Claim 11 (**Currently Amended**) The optical pickup device of claim 9, wherein said recessed sections-middle regions are planar.